



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,672	11/30/2000	Terumasa Haneda	1086.1127/JDH	1587
21171	7590	02/10/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LEE, PHILIP C	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/725,672

Applicant(s)

HANEDA ET AL.

Examiner

Philip C Lee

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 6, 8 and 9 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7 and 10-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. This action is responsive to the amendment and remarks filed on September 20, 2004.
2. Claims 1--11 are presented for examination.
3. Claims 5-6 and 8-9 are allowed.
4. Claims 2 and 3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
5. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 112*

6. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - a. Claim language in the following claims is not clearly understood:
    - i. As per claim 2, lines 27-32, it is unclear how the internal register access packet and the response system packet were both stored in the second packet

buffer [i.e. the internal register access packet should be stored in the first packet buffer.].

*Claim Rejections – 35 USC 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art [AAPA] in view of Aybay, U.S. Patent 6,185,221 (hereinafter Aybay) and Araujo et al, U.S. Patent 6,463,071(hereinafter Araujo).

8. As per claims 1, 4 and 7, AAPA taught the invention substantially as claimed for a computer system in which a plurality of packet transmitting/receiving units provided in correspondence to external modules are connected via a packet bus (page 2, lines 4-18 of the specification), in which each of said packet transmitting/receiving units is constructed in such a manner that

when a packet received from said external module is to be transmitted, in the case where a transmitting request is issued to a transmission destination and a transmission permission is obtained, said packet is transmitted, and in the case where the transmission permission is not obtained, said packet is stored in a buffer and said packet transmitting/receiving unit is set into a transfer waiting state (page 3, lines 9-17 of the specification), and

when the transmitting request is received from a different packet transmitting/receiving unit, if said unit is in a packet receivable state, a response of the transmission permission is made and the packet is received, and if said packet transmitting/receiving unit is in a packet unreceivable state, the response of the transmission permission is inhibited (page 3, lines 20-page 4, lines 10 of the specification).

9. AAPA fails to teach storing priority assigned packets into corresponding buffers with assigned priorities. Aybay taught that, whether a kind of packet is an internal register access packet (e.g. control packet), a response system packet (e.g. high priority packet), or a command system packet (e.g. medium priority packet) is discriminated, the packet is stored into corresponding packet buffer among a plurality of packet buffers in which priorities have been assign (col.3, lines 50-61; col. 8, lines 41-57; col. 9, lines 6-24).

10. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of AAPA and Aybay because Aybay's method of storing priority assigned packets into corresponding buffers with assigned priorities would increase system flexibility of the teachings of AAPA by allowing a quality of service priority

Art Unit: 2154

assigned to the requests in order to maximize data packet transfer through a switch (col. 3, lines 29-36).

11. AAPA and Aybay did not teach withdrawing a transfer waiting state and transmits the packet of high priority. Araujo taught in the transfer waiting state of said command system packet of the low priority to a certain transmission destination, in the case where the response system packet of the high priority to another transmission destination is received from the external module, said packet transmitting/receiving unit withdraws said transfer waiting state and transmits the response system packet of the high priority (col. 4, lines 10-19; col. 7, lines 45-67; col. 9, lines 65-col. 10, lines 6).

12. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of AAPA, Aybay and Araujo because Araujo's method of withdrawing a transfer waiting state and transmits the packet of high priority would increase the efficiency of Aybay's system and the teaching of AAPA by avoiding the delay of queuing high priority traffic while waiting to transmit low priority packet (col. 2, lines 45-51).

13. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art [AAPA], Aybay and Araujo in view of Miller, U.S. Patent 6,604,161 (hereinafter Miller).

Art Unit: 2154

14. As per claim 10, AAPA, Aybay and Araujo taught the invention substantially as claimed in claim 7 above. AAPA, Aybay and Araujo did not teach said external module is a PCI bridge. Miller taught wherein said external module is a PCI bridge module for performing a conversion between a command on a PCI bus and the packet (col. 6, lines 41-48).

15. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of AAPA, Aybay, Araujo and Miller because Miller's teaching of an external module that is a PCI bridge would increase the field of use in their systems.

16. As per claim 11, AAPA, Aybay, Araujo and Miller taught the invention as claimed in claim 10 above. Miller further taught wherein modules such as host, input/output devices, memory, and the like are connected to the PCI bus of said PCI bridge module through a PCI module (col. 5, lines 36-40).

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

He, U.S. Patent 6,704,316, disclosed a method of assigning priority classes to packets.

Suzuki, U.S. Patent 5,140,584, disclosed a method of storing priority packets into corresponding priority classified buffers.

Proctor et al, U.S. Patent 6,125,110, disclosed a method for determining a packet transmission order.

18. Applicant's arguments with respect to claims 1-4, 7 and 10-11, filed 09/20/04, have been fully considered but are not deemed to be persuasive and are moot in view of the new grounds of rejection.

19. In the remark applicant argued that

- (1) Araujo does not teach setting priority based on packet type.
- (2) the cited references do not teach buffers for each type of packet or priority.
- (3) the cited references do not teach transmitting a specific type of packet, an "internal register access packet".

20. In response to point (1), Aybay taught wherein priority is set based on the type of data (col. 9, lines 8-10).

21. In response to point (2), Aybay taught wherein each packet buffers for each type of priority (col. 3, lines 50-55).

22. In response to point (3), Aybay taught transmitting a specific type of packet, an "internal register access packet" (e.g. control packets) (col. 9, lines 6-14).


23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action



Art Unit: 2154

is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Lee whose telephone number is (571) 272-3967. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Philip Lee



PHILIP LEE  
CURRENT PATENT EXAMINER  
PATENT CENTER 2100